

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Attorney's Docket No. SHORE-002

In re Application of:
Haase, Richard

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Art Unit: 1724

Serial No.: 09/733,392 & 90/005,710

Filed: 12-7-00 & 4-24-00

Examiner: Barry, Chester T

Title: Method for Dewatering of Sludge

Declaration of Audrey L. Haase

My name is Audrey Haase. I am of sound mind, capable of making this Declaration and have personal knowledge of the facts stated herein.

1. I am employed by ClearValue Inc. as Vice President of Distribution - Coordinate all shipments and manufacturing operations. Additional duties include the management of client accounts in Arkansas and North East Texas and Accounting.
2. I have knowledge and experience in the application of polyelectrolytes, including polyDADMAC, polyEpi-DMA, polyacrylamides, metal salts and polynuclear aluminum compounds.
3. Prior to, during and after the time frame of 1997 I visited the wastewater plants of College Station and Texarkana Texas.
4. During the fall and winter of 1996 College Station Texas was having dewatering and economic performance difficulties with thermophillic bio-solids dewatering. I performed one plant demonstration during November of 1996 with Richard Haase at College Station wherein dewatering of the ATAD thermophillic digested bio-solids was performed with a 20 percent active DADMAC in combination with a cationic polyacrylamide, as compared to previous operation with only a Nalco cationic polyacrylamide.
5. This demonstration obtained a near 250% increase in centrifuge throughput and increased the dry cake solids from near 10% to near 15%, while

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reducing centrate solids from near 4% to near 1%.

6. In the winter of 1996, I was the representative for the wastewater treatment plant in Texarkana, Texas.
7. I was informed by City officials that Texarkana had in the last weeks increased their digestion temperature from near 95 °F to near 115 °F having an operating goal of 120 °F to obtain the pathogen degradation associated with thermophillic digestion.
8. I additionally witness that the performance of the belt press dewatering operation to be very poor as the floc was so loose that it did not even stay on the belts, thereby producing a significant mess in the dewatering area.
9. ClearValue recommended that the City of Texarkana dewater the new thermophillic bio-solids with a combination of CV 3650 (DADMAC) and CV 5240II (cationic polyacrylamide emulsion), the combinations of chemicals taught in US Patent 5,846,435.
10. This recommendation proved very successful, thereby improving belt press throughput and dewatered percent solids beyond the previous performance available when dewatering mesophillic digested bio-solids.
11. I have been informed that Ciba (Allied Colloids at that time), Polydyne and Callaway Specialty Chemicals, along with a few of their distributors attempted laboratory and belt press testing of their products to qualify for the bid on Texarkana the belt press dewatering and secondary TSS polymer as late as in the fall of 1997.
12. I have also been informed that none of the products tested by any of said suppliers provided a product to qualify to dewater the thermophillic bio-solids.
13. I believe that after witnessing the use of the chemical compounds provided by ClearValue to Texarkana that in the spring of 1998 Allied Colloids and Polydyne were able to provide an emulsion polymer system which met both laboratory and plant performance requirements to dewater thermophillic digested bio-solids.
14. It is my understanding that Ciba (Allied Colloids) and SNF, Inc., along with their associated distributors are known to provide polyquaternary

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amines in the dewatering of thermophillic bio-solids and bio-solids from a thermophillic digestion process to the following cities: College Station, Texas; Texarkana, Texas; Houston, Texas (Gulf Coast Waste Disposal Authority); Los Angeles, CA (The Hyperion Plant); Tampa, FL; Birmingham, AL and Jackson, MS.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this application or any patent issued thereon.

Full name of Declarant: *Audrey Lois Haase*

Residence: *4402 Ringrose Dr. Missouri City, TX 77459*

Citizenship: USA

Post Office Address: N/A

Date: *9/12/03*

Audrey Lois Haase
Signature of Declarant